

This topic can be found at:

<https://forums accuratereloading.com/eve/forums/a/tpc/f/4711043/m/2861098911>

**michael458**

**09 November 2009, 05:08**

### Terminal Bullet Performance

We have had some excellent contributions from nearly everyone, including Alf. Alf has in fact provided some good information of which has helped confirm some issues concerning the mix, which I stated earlier in a post directed to Alf.

It was mentioned in one of today's posts of exactly how I know the wet newsprint/catalog-magazine medium was 31% tougher. Well, I am not sure where 31% come from, as I have stated between 30-35% as I recall. The reason I know this, is because I have tested both of them with the same bullets, duhhhh!

Once again for the reading comprehension retarded, of which there is only one individual on this entire thread with this disability:

Quotes By Michael

First Post on this Thread:

As stated there is no test medium that will exactly duplicate animal flesh. This is true, and rather "common" knowledge. Most hunters never test a bullet or load except by shooting game in the field. Shooting animals in the field is never a satisfactory way to conduct true and proper test work, no two shots can be alike, one may hit bone, another soft tissue, one straight on, one at an angle. This does not mean one cannot learn from field tests, quite the contrary, but this is not the arena in which to begin test work! I do not wish to go to the field "ignorant" of how any of my equipment may or may not perform, I would much prefer to have some prior knowledge of how a bullet may or may not work long before possible costly, and unethical "failures" occur in the field.

Again, for those who cannot comprehend the written word---No Test Medium Exactly Duplicates Animal Tissue! However, proper test medium will give one reasonable comparisons not only between different bullets, but will give us some insight into how a bullet may or may not perform in the field.


With this being posted, right up front, everyone can see, read, comprehend, I see nothing complicated about the above statement, I see no contradictions in this statement. So I don't get where there is any issues concerning this???? It actually is a moot point.

Nearly the entire first post should have solved any such issues from that point on.

Any other reply to the frothing at the mouth of the retarded is truly a waste of valuable time.

Capoward, I have read many of those old african books too, seen the same thing as you state, I have seen the same exact thing on those issues right here on AR too. The photo of the messed up bullets was fantastic, and very much to the point! Excellent work, as always! If you happen to run across any other information such as that it could come in handy later I would think!

Regardless of today's sidetrack into stupidity, we still have covered some excellent ground. I think something we can all move forward with. There are a couple of other areas of study as we continue in our endeavors, mentioned a lot by me very recently, non conventional bullets. Those that do not fit our normal thought process, of expansion and "transfer of trauma". I have some thoughts on this, but in much of this process I am going to need some assistance from Dr. RIP and I also have a feeling that Dr. Alf may have some positive input of his own on this subject also. I will start us off in the morning on this subject, as you guys know I

turn in early here on the east side, just after I have my "coolaid"!  

Cheers Guys

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!  
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

**RIP**

**09 November 2009, 05:15**

capoward,

Good enough.

Alf's credentials in the African game fields, bushwar combat surgery, civilian mayhem, and a half century of the scholarly-scientific-obsessive-compulsive collection of knowledge and dead animals (such as rhino with a handgun)

give him a pass on showing photos of his lab.

It was relocated from RSA to British Columbia, and all the old experiments he has done do not need repeating, so he likely does not have the lab set up, nor even unpacked all the old evidence.



I am smalltime in comparison to Michael or Alf, by any comparison. I have limited hunting experience on only two continents, but I am a former flight surgeon with undergraduate chemical engineering background, and have done some "testing" myself, being of the shooter-tester bent.

My favored medium was the Iron WaterBoard Buffalo.

The IWBB is a square-tubed stainless steel and angle Iron (plated steel) frame in which I set plywood boards and flatsided plastic

buckets of water in series.  
Bolted together like a giant Tinker Toy.  
Modular to allow replacement of members damaged by side-veering bullets.  
That always happened with roundnose solids.

Ten compartments each 10" deep. 100 inches of IWBB.

The IWBB would be a nice holder for wet newspapers and magazines too. But since I am not a pulpwood tycoon, the plywood and water buckets are easier for me.

Hell, I could put ordnance gelatin in the IWBB compartments in 10" blocks times 10 too, but that would involve an industrial scale mixing and refrigeration plant,  
and I would have to buy a quality BB gun to calibrate each block of gelatin before each test shot. 😞

Animal hide, meat, ofal, bone, anything could go in those flat-sided buckets, but that would require a slaughterhouse at my beck and call, as well as a landfill.  
And it still would not be a live game animal,  
yet each shot would be different, totally unscientific reproducibility, shot-to-shot.  
That would reduce it to anecdotal data from game animals though, eh?

We use what we can make do, us shooter-testers.  
We see what bullets do best, guess what is going on with the failures or successes, or get someone like Alf to explain it,  
and then take the best evidence to the field.  
Evidence-based, NASA-like rocket surgery. 😊

I too need a new cartridge or bullet to whet the desire.

Here is one I need to get Boomer to help me finish designing,  
the **12 Gauge/.510 Bore rifle**:



The mockup uses the Browning "Little Skeeter" in .410 reduction for 12 gauge chamber insert.  
However, in its current external configuration, it is triple-head-spacing: rim, shoulder, and case mouth.  
maybe that square, thick case mouth could be tapered to a second neck and shoulder, Weatherby-style venturified of course. 😊

DRG says: "Kiss my liberal grits!" 🤪

**michael458**

**09 November 2009, 05:17**

Shootaway

I almost forgot you in the raving of the ignorant today, I am sorry! You had a question about how the Winchesters feed the FN bullets so well and some other types do not. To be perfectly honest with you, I am not qualified proper to answer that question. Far from being an expert in that arena, RIP, or Jim or Dennis probably can answer that far better than I can. I know Jeffe can also.

Best I can do is tell you they work, the why and mechanics is a different story better answered by someone better qualified.

Michael

<http://www.b-mriflesandcartridges.com/default.html>

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**DWright**

**09 November 2009, 05:59**

Shootaway,

Feeding will have a lot to do with the shape of the bottom on the reciever, the shape of the follower, and cartridge.

For example, I have had to file the jogs out of the reciever bottoms of 2 Kimber rifles I have, to get them to feed RNSPs better. It simply changed the feed angle to 'correct' for that bullet. That took the teeter tooter out of the cartridge case as it rested against

the receiver.

Just look carefully as the case is pushed forward and see where the FN hits to keep it from feeding smoothly. Then figure out what needs changing to feed directly into the chamber.

FNs are the hardest bullet to get to feed correctly because of the width of the nose that has to enter the chamber, without hitting the sides. Sharp pointed ones being the easiest.

Also, longer cartridges will have a tendency to feed easier, as the shorter ones are forced to change directions at sharper angles to feed.

Hope this helps a little.

Dennis

<http://www.mazamasportinggoods.com>

**capoward**

**09 November 2009, 06:00**

Rip,

Thanks for the background on Alf; I was unaware and accept his statements as coming from his experience.

I enjoyed your shared experiences with your IWBB; I followed them closely through your building and revision. Boy you must have gotten some kind of deal on those buckets...around here they can run \$3-\$5 each!

I'd be much easier and cheaper here to interrupt newspapers and magazines on the way to the recycle center...as they'd end up there anyway. Unfortunately my property is within the city limits so I have to even watch pest exterminating with my compressed air pistol.

Alf,

Welcome to North America. If you ever get your lab setup now that you're in Canada I hope you'll share your experiences with us as Rip and Michael have.

Michael,

As I'm a resident of Kalifornia I look forward to the next area of discussion/study - non-conventional bullets.

Shootaway,

I'm no expert regarding FN bullets and firearms feeding but have been reading every thread in the AR Gunsmithing Forum relating to it. Basically I understand that FN large metaplat bullets are a pita to get to properly feed in a bolt action rifle; no sweat from a single or double barrel or from a lever action...but there are gunsmiths that can work the feed rails and ramp so that the FNs will feed and function flawlessly, but you may then have an issue with spire point, semi-spitzer or perhaps even RN bullets afterwards.

I like the idea of how Michael's bullets are designed; both FN and HP are same basic shape and nose metaplat so once the bolt action rifle is properly tuned for the FN it'll work without issue also with the HP.

Me I'm a "M98 wingnut" and have a listing of gunsmith/gunmakers who can get my Mausers to feed and function FN bullets without issue...only issue is money out of my pocket to make it happen! 🤖

Jim 🤖

"Life's hard; it's harder if you're stupid"

John Wayne

**RIP**

**09 November 2009, 06:02**

Michael,

I have little gunsmithing acumen, and shootaway is on ignore.

Sorry, that buck will have to stop with someone else.



DRG says: "Kiss my liberal grits!" 🤖

**capoward**

**09 November 2009, 06:02**

Rip,

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quote:

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Hope this helps a little.

Good point Dennis.

Jim 🤖

"Life's hard; it's harder if you're stupid"  
John Wayne

JPK

09 November 2009, 08:10

quote:

Originally posted by capoward:

Interesting discussions as regarding RN vis-à-vis FN solid performance; obviously both nose variations kill and both nose variations have killed for many years.

Thought I'd throw this picture out into the discussion; all are RN C&C jacket solids:



**Above, some solids aren't "solid."** (Extract from Page 79, Rifle Magazine, November-December 2009)

I can't say whether these bullets killed their respective live animal, the ultimate goal, I can however say that they didn't perform as optimally as desirable.

I believe you will find that the first four slugs are from 470NE's, which, as I have noted, because of their non-hemispherical shape are known to tumble more frequently than hemispherical nose solids, and to veer more frequently as well. Moreover, the bullets pictured are cupro-nickel jacketed, not steel jacketed.

But in any event, what you see is the result of tumbling. RN solids, of any construction, poor, excellent, cup and core, cup and bonded core, mono metal, have a strong propensity to tumble in game when much of their velocity is expended. Of course, by then, they have done their job. Tumbling is not a predictor of veering, btw.

I get a kick out of you all. It is high fun reading all of the rank bull sh-t flowing at high velocity and volume.

Here is but one more example of the complete disregard for real life performance, let alone science, common sense and reason - Michael tells us that more velocity for solid bullets doesn't always add up to more penetration, and then gives four or five ridiculous, incomparable, off topic examples along with the assertion that resistance to penetration increases with velocity so dramatically that it overcomes a faster solid bullet's energy/momentum so that it penetrates LESS than a slower, similar one. Try this logic instead: When a faster similar solid bullet impacts the target at  $x+ev$ , which is baseline velocity plus the velocity differential between the faster and slower bullet - it begins to penetrate and to slow down. At some point, it has slowed sufficiently to lose all of the  $ev$  and is traveling at  $x$ , the same speed as the slower bullet at impact. It now has the same energy and momentum as the slower bullet. Its penetration will now equal that of the slower bullet. So its penetration will total the amount it penetrated while slowing from its impact velocity to  $x$ , the impact velocity of the slower bullet, plus the penetration it achieved from  $x$  velocity until it slowed to a stop. Its penetration will ALWAYS exceed that of the slower similar solid bullet. (Assuming the same target material, and assuming that the target material reproduces results in muscle.)

When you test to ensure validation of your "test", and not repeatability of real life performance, one would only hope that what passes the "test" passes in real life performance. And, to be true, it is the only attribute of Michael's "tests" and medium, as he reports.

Also get a kick out of the call for "scientific tests" which are reproducible - and from the same rifle too boot! Performance in game is reproducible in game, though as a range, because of the variability of the target - performance in paper is not, though it is highly

reproducible in paper. Moreover, the leader of your "irrelevant test Clique" has a very strong propensity to fail to control for velocity and weight, spin, bore while all at the same time spouting off unfounded inferences based on a medium that fails to produce results predictive of real world performance. Further, two out of the four? of you have taken me to task for limiting my own experiments to but one bore and one rifle!

All the while, you all do your best to shoot the messenger of this unfortunate news that the tests are irrelevant. But hey, shoot me all you want, doesn't change the nature of the irrelevant tests!

I am positive that Richard Harland, Ron Thomson and Barry Duckworth are comforted by the vast testing you all have cumulatively done proving that the steel jacketed RN bullets they used to kill about 15,000 elephants between them - yes, fifteen thousand - won't travel straight and will veer preventing them from doing their jobs!

TESTS! LONG LIVE THE TESTS! LONG LIVE THE MEDIUM, LONG LIVE WET NEWSPRINT AS THE MEDIUM! (But don't forget that actual hunting isn't the point, after all, hunting for hunting sake isn't something we do, we only hunt to prove our TESTS! Forget and ignore actual field results that don't fit the TESTS and anything that confounds the TESTS must be ignored! Not explained away, but just ignored - because they do not fit the TESTS!)

Go play make believe and have fun boys!

Edit to add: Really your BS and blind eye worship of Michael's tests, and other irrelevant tests, are more than coincidentally reminiscent of the tale of the King Who Wore No Cloths.

JPK

□ Free 500grains

**RIP**

**09 November 2009, 08:52**

Is JPK's dyslexia acting up, or is he just getting expanding softs and nondeforming solids confused?  
The elephant cullers used what the ammo makers offered.

Could Mohohbo get factory loaded FN solids for his .458 WinMag?  
Richard Harland's .505 ammo: Could he find FN solids for that?  
Barry Duckworth, 470 NE or what?

They probably had little chance to try FNs.

Oom Johnnie Buhmiller was loading some FN solids in the 1940s.  
He knew they worked better even then.  
Mr. Johnson's 50 Alaskans used the base of a 50BMG ball cut square in the middle, similarly.

Buhmiller was the first to do the 500 Mbogo (necked .416 Rigby to .458, .475, .510) and the .458/378 WBY, as well as the .510/378 WBY, way back when, before the 460 WBY and the many 500 WBYs subsequently."

Oom Johnnie was ahead of his time.  
Finally all the commercial ammo loaders are loading FN solids.

FN versus RN is indeed a 🤪 t point.

DRG says: "Kiss my liberal grits!" 🤪

**JPK**

**09 November 2009, 09:17**

quote:

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Barry Duckworth, 470 NE or what?  
They probably had little chance to try FNs.

RIP, true, they all used factory RN ammo. BTW, they all used 458wm's for almost all of those 15,000 elephants. But even with those s--ty RN, which the TESTS predict cannot penetrate straght enough, they killed those 15,000 elephants. Go ahead and ask each of them if they recall having any problems with those s--tTTY RN's. They will answer no. I've asked Barry, Ron and Richard tell the same in their books.

So, do you think that 15,000 real world examples in real world targets trumps any result in wet newsprint? I hope you do.

JPK

□ Free 500grains

**capoward**

**09 November 2009, 09:18**

JPK,

Thanks for the comments.

quote:

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I firmly believe that Richard Harland, Ron Thomson and Barry Duckworth, plus another other African hunter post 1890 that you'd like to name, would jump at the opportunity to use modern mono-metal CNC machined bore-rider FN bullets rather than the steel jacketed C&C bullets available to them. Just as African hunters changed from round lead ball bullets to the more reliable and better penetrating jacketed C&C bullets that were later supplanted by the more reliable and better penetrating steel jacketed C&C bullets.

I don't personally know any of them but every book that I've read regarding the old African hunters indicated that while a few would hang on to the bullets, cases, primers, and powder they were used to that all others were always on the lookout for more reliable bullets, cases, primers and powder and would adopt the better mouse trap ASAP.

Myself, I'll continue to use rifles whose action design was introduced to the German military in 1898...that's my contribution to a bygone era. However I will definitely use current manufacture cases, primers, gunpowder as well as computerized CNC machined mono-metal bore-rider bullets when the intended game potentially will simultaneously hunt me and/or kill me should I not do my part. I will utilize quality bonded core bullets over straight C&C bullets for non-dangerous game unless I'm looking to explode varmints.

Life goes on JPK...Use whatever era technology that rings your chimes.

Jim 🤖

"Life's hard; it's harder if you're stupid"  
John Wayne

**Macifej**

**09 November 2009, 09:18**

15,000 people have driven across country in model T's too ...

**RIP**

**09 November 2009, 09:24**

Alf,  
Thanks.  
The FN solid sucks better than the RN solid, IMHO.

quote:

Originally posted by Macifej:  
15,000 people have driven across country in model T's too ...

Touche! That'll do.

The FN solid is already "conventional," state of the art er, uh, science.

I am curious about the "Non Conventional" now!

DRG says: "Kiss my liberal grits!" 🤖

**capoward**

**09 November 2009, 09:24**

quote:

15,000 people have driven across country in model T's too ...

Some still periodically try to do so in old car runs but rarely do any make it coast to coast without being repaired along the way. Give me air conditioning, cruise control, and soft leather seats any day!

Jim 🤖

"Life's hard; it's harder if you're stupid"  
John Wayne

**JPK**

**09 November 2009, 09:28**

Alf,

Not my photos, not posted originally by me, they are from a book I have read though - can't recall ofhand which book. Posted by one offended by reality.

I have dug too many bullet wound channels and found too many RN solids pointing in the right direction to believe that they all tumble. But I have seen the evidence and am confident that a large percentage tumble in target. Though not until they have lost a

large portion of their initial in target velocity, and so are far from impact.

PMP's aren't the only brass bullets to break. Barnes has a history of breaking bullets dating from their RN brass solids. The cannelure was their weakspot too.

I still owe you a response to an earlier question from this summer. I will get to it, but this year has been something special as far as time demands and work loads, and the answer isn't available to me off the top of my head. {Don't actually recall the question, but will find it in due time.}

JPK

Free 500grains

**JPK**

**09 November 2009, 09:47**

quote:

Originally posted by capoward:

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Life goes on JPK...Use whatever era technology that rings your chimes.

Hey, I'm a FN fan, BUT NOT FOR THE FIRST SHOT ON ELEPHANT! My experience with FN's is that they are not as reliable as steel jacketed RN's for punching through heavy bone, which may be required of the first shot, a brain shot, on an elephant. Second shot and thereafter, FN's rule because of their substantially greater penetration, perhaps needed since the second or subsequent shots are either insurance shots or made scrambling to make up for a missed brain shot, and so maybe at the worst angles.

As for buff, any decent solids delivers more than sufficient penetration, RN, FN, ogived, truncated cone, brass, copper, cup and core, cup and bonded core. Doesn't matter.

In lieu of a RN or FN solid, I would suggest a cup point North Fork for buff. 20% less penetration than a NF FN solid, which gives it penetration on par with, perhaps exceeding the RN solid in a given cartridge, some limited expansion, greater wound channel. For buff, whats not to love about that?

RN or FN? Both have their advantages and their disadvantages. But no matter how anyone charecterises the RN's performance, it has stood the test of time and earned hundreds of thousands of successes. It is reliable for DG. More reliable on elephants than current FN's. No amount of re-writing history, or phony tests will change that, though future advancements may eventually make the FN as reliable and may even eventually render the RN obsolete. Not soon, I think.

Whether Richard Harland, Ron Thomson or Barry Duckworth would use a FN is immaterial - though Richard Harland has relatively recently voiced his continued confidence in the steel jacketed RN's here on AR - they successfully used RN's for those 15,000 elephants. Successfully, despite the TESTS and opinions of those here that RN's aren't good for s--t! And none of them recall any issues with those RN's!

JPK


Free 500grains

**capoward**

**09 November 2009, 10:02**

quote:

Not my photos, not posted originally by me, they are from a book I have read though - can't recall offhand which book. Posted by one offended by reality.

 I posted the photograph and I'm not offended by reality.

Reality is that more than 15,000 elephants have been killed in Africa by spears. Not my weapon of choice but the elephants were killed none the less.

JPK you're free to use whatever bullet construction you want...Reality is that no one participating in this thread has said otherwise.

Jim 

"Life's hard; it's harder if you're stupid"  
John Wayne

**JPK**

**09 November 2009, 10:09**

quote:

Reality is that more than 15,000 elephants have been killed in Africa by spears. Not my weapon of choice but the elephants were killed none the less.

Not by three guys still alive to talk about the success of their RN's, err, uh, spears!

Your posts belie your offense, you rant against reality. Now, why would that be if it didn't get under your skin?

JPK

o Free 500grains

**capoward**

**09 November 2009, 10:35**

quote:

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JPK

JPK,

Truthfully from all of your prior comments I'd never have guessed that you find FN bullets useful. Nor would I have guessed that your principal beef with them is 1st shot - brain shot - on elephant.

So from your above noted statement your only issue RN vis-à-vis FN bullets is that in your perception RN steel jacketed C&C bullets will penetrate elephant heavy facial bone better/more reliably than will FN bullets. That's your experience and your beliefs.

I have no issue with your 1st shot preference just as I have no issue with another hunter who believes that the current crop of CNC machined FN mono-metal bullet is more reliable for the same 1st shot.

I agree that North Fork's cup point solid is a better bullet to use vis-à-vis either a RN or FN solid on buffalo.

Ah just saw your follow up post. No I don't imagine that any elephant spear hunters are still alive, long dead, replaced by those who



use AK47s in their stead.

I'm neither offended by nor pissed at any of your comments. Hum...was it Forest Gump who stated "reality is as reality does"? No, most likely not.

Jim 

"Life's hard; it's harder if you're stupid"  
John Wayne

**accit** **09 November 2009, 15:03**

Michael, thanks for the informative post. Being a layman in the field of science I also appreciated Alf's technical explanation of your practical observations.

Regarding the PH that got stomped by the ele using a SP as 1st out option, could a TSX/Mono expanding bullet after shedding its petals, with realistic probability, continue its path as a "solid" and cause enough penetration ??

**michael458** **09 November 2009, 16:51**

Well I can see it was a busy night. Gentlemen JPK is a total waste of our time, and not worth the effort put into him. I know this to be a fact, as I have wasted page after page on him. From the very beginning of my short tenure here at AR. Not one word has changed from his mouth since June 2008, when I first come on board.

I have been 100% consistent since day one, I have stated many many times that no test medium is the duplicate of animal tissue, that there are no absolutes, and so on, from the very beginning. You with enough intellect know what I have stated many times. Yet every time JPK misquotes, or just lies about my statements, makes up statements I have never made, and you know the story. I have been going back over statements made by him back to June of 2008, and it is a futile effort, they are all the same as right here in this thread, my statements are the same as here in this thread also.

Let me tell you a bit about JPK. He has a case of "Hero Worship" going on. Since he has no accomplishments, skills, or talents he can call his own, he is 100% reliant on others that have tread before him. You will see him make mention of 465HH and Dan McCarthy. I do not have the pleasure of Dans acquaintance personally but have read some of what he had to say, and in private conversations with 465 HH which was so kind as to actually send an article done by Dan some time ago. As I recall or believe Dan is 500grains. He seems to be a very experienced and intelligent individual. Dan also seemed all in favor of all sorts of test work being conducted concerning terminal performance, test work other than animal flesh. Now it also seemed that Dan did not like wet newsprint! A very important point here and now. 465HH and I have had several, private conversations, and he also is a respected, and reasonable individual, and is capable of having reasonable intelligent conversation. Both of these individuals seem to be excellent sources of information and have good information to share.

The problem here lies with JPK's interpretation of intelligent data. Since Dan says that wet print is not a good medium---Then goes JPK, like a good lap dog he latches on to this and runs with it. Not knowing why, not caring, just repeat, repeat, repeat. He even repeats or attempts to repeat Dan's test data in the field, shooting dead elephant heads. Like a good lap dog, just repeating the work Dan has done, and nothing else is possible to enter the equation. While it seems Dan is receptive to new ideas, and while I know 465 HH is receptive to new ideas, JPK cannot be, he is stuck in time from when he first started his "hero worship" and does not move from that, even to the point of misquoting and making up statements, untrue, unfounded statements concerning mostly myself to attempt to further his legend of himself as a re-incarnated Dan McCarthy. The problem here is that JPK does not have the intelligence of Dan McCarthy, nor 465HH, and can only repeat repeat repeat the lies concerning myself and others. He has not furthered his cause by being able to do something of his own work or study, merely upon the back of others. He does not have the experience in shooting, bullet design, cartridge design, nothing.

What he has is enough money to go to Africa and shoot elephants, conduct the same exact tests as Dan did, read old African hunting stories, and imagine himself one of the great elephant hunters. At the country club, and dinner parties, he will always inject himself in as the "great white hunter" on the dark continent, in some circles he will be the center of attention with great stories of charging elephants, and well use your imagination, you know the drill, we all know this sort, you will encounter them in huge numbers at the SCI shows. I have been involved in many areas of shooting for over 30 years now, we have all seen this, ever hang around the gun shop and listen to the BS that walks in on a daily basis, from all the "experts". Same story.

His issues are with me in particular, obviously he sees me as a threat to his traditional beliefs. On numerous occasions I have agreed with his findings, and still do on many points, but that is irrelevant and he will continue to repeat and repeat and repeat the same old story over and over---the greatest one is that I state that a RN will consistently 100% of the time veer off course in game animals! I have never made that statement. I have stated the absolute opposite of that statement, but he keeps repeating it. His hopes are that someone that is not familiar with the entire matter will believe that I did in fact say that, when it is a total lie and fabrication upon his part. For the unknowing that might see this it has discredited me, based upon a total lie.

I promise that if my only statement on AR from this moment forward is this;

The sky is blue!

Then what that really means according to JPK is that I said RN solids veer off course in game animals consistently all the time!

I promise today that from this moment forward if I stated the following.  
JPK you are correct!

Then according to JPK I said that RN solids veer off course in game animals consistently all the time.

So it makes little or no difference what I might state, or not state, it will always get back to that same statement---even if I dig up 100 true statements that I made that are just the opposite of that, which I have done on this very thread--not 100--but right from my first post, it is of little consequence and he refuses to acknowledge my real and true statements, in favor of fabricating his own.

In Dwrights mention of Mr. Bob West this is exactly what we are dealing with, while Bob was correct in his analysis, it is a shame that the knowledge he gained could not be visited because he knew that it would be an argument with lesser beings, that could

not comprehend.

The effort it takes to deal with ignorance is worth it however. Ignorance is far different than many things, to be ignorant is no shame, to be to stupid to know you are ignorant is quite another thing.

JPK is not worth the effort put into even this one post. Nothing, repeat nothing has been served to move knowledge forward by having one word wasted on him. He does not even care, or have enough intellect to realize that he is making a fool of himself! How can you deal with something like that?

He is a small man of very little consequence.

I truly wish we could have continued without this, but knew that it was coming one way or the other. I stand by everything that I have TRULY stated, it is here for everyone to freely read and make up your own mind. I ask that you, especially the unknowing that might come new to the thread, please read MY STATEMENTS under MY POSTS, and not those of JPK which are mere fabrications and lies.

Michael

<http://www.b-mriflesandcartridges.com/default.html>

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**michael458**

**09 November 2009, 17:56**

Quotes By JPK

### Section 1

Yes with respect to nose shape only and only to a degree, but so long as they are solids SD will still be a significant predictor of performance. A flat nose SD .300 bullet will outpenetrate a round nose SD .300 bullet at the same velocity. That is the extent of limitations on SD comparisons.

????????????????????

If you look at my reported results with 450gr FN North Forks and 500gr RN Woodleighs on elephant heads and bodies, which we have discussed before, you will note that the Woodleigh is loaded to higher portential than the NF. The heavier Woodleigh has more enregy as well, but the NF out penetrates it by something on order of your observed 35%. I can't accurately calculate the % difference I've observed since so many NF's exit that it skews results downward.

### Section 2

Solid bullet construction is all but immaterial.

????????????????????

I believe you will find that the first four slugs are from 470NE's, which, as I have noted, because of their non-hemispherical shape are known to tumble more frequently than hemispherical nose solids, and to veer more frequently as well. Moreover, the bullets pictured are cupro-nickel jacheted, not steel jacketed.

### Section 3

JPK

Michael can spout his irrelevant results from his irrelevant tests and repeat his erroneous inferences, but he can't accurately predict real world results with his tests.

Michael---But.....

JPK

I believe you will find that the first four slugs are from 470NE's, which, as I have noted, because of their non-hemispherical shape are known to tumble more frequently than hemispherical nose solids, and to veer more frequently as well. Moreover, the bullets pictured are cupro-nickel jacheted, not steel jacketed.

JPK

RN solids consitently veer in Micael's test medium. They do not often veer in game.

Michael----OFTEN???

JPK

one of us

Posted Dec 11, 9:46 AM

Hide Post

quote:

Alf,

From my bullet digging, it is apparent that the .458" Woodleigh round nose solids tumble - some of the time. If they do tumble, it is after they have penetrated well and lost considerable speed and it seems the trigger is an extra rapid loss of speed. Not all of them tumble. Some, many, come to rest nose first. Since the path of a tumbled bullet is so obvious, it is clear that these many did not

tumble and the nose first attitude was no fluke.

My digging also shows that flat nose solids penetrate better than round nose solids regardless of whether the round nose tumbles.

JPK

You see, this could go on and on and nothing ever resolved.

Michael

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**michael458**

**09 November 2009, 18:06**

quote:

Originally posted by accit:

Michael, thanks for the informative post. Being a layman in the field of science I also appreciated Alf's technical explanation of your practical observations.

Regarding the PH that got stomped by the ele using a SP as 1st out option, could a TSX/Mono expanding bullet after shedding its petals, with realistic probability, continue its path as a "solid" and cause enough penetration ??

Accit

Welcome and you are welcome, I hope you can please overlook some of the idiotic things, and people and see thru some of that to be able to get something positive from the data.

I am not familiar with the PH and the elephant, but if he was in fact using any sort of SP, soft point, or expanding bullet as a 1st option on elephant, then in my opinion he made a grave error in judgement.

You ask if I think a TSX or any expanding bullet after shedding its petals with any realistic probability can continue its path as a solid, and get enough penetration.

My answer to you is that yes, it would be possible, HOWEVER not with any true reliability. From my experience while penetration is fantastic, compared to other expanding bullets, this does come up short when compared to true solid bullet performance.

I would never rely upon any expanding bullet, conventional, or non conventional for elephant work. Even I would choose a RN solid if that was the only choice available.

Michael

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**accit** **09 November 2009, 18:37**

" am not familiar with the PH and the elephant, but if he was in fact using any sort of SP, soft point, or expanding bullet as a 1st option on elephant, then in my opinion he made a grave error in judgement." [QUOTE]

Thanks. It was an emergency and certainly not planned. (It was from another AR thread)

I was just curious whether penetration on ele brain could be reached reliably given all your testing with TSX.  
A good solid would always be first choice.

I've been reading the forum for quite some time, and I always wait for confirmation from "trusted" members before I take things to heart, thanks for the heads up.

**michael458**

**09 November 2009, 18:41**

FROM JPK

Michael can spout his irrelevant results from his irrelevant tests and repeat his erroneous inferences, but he can't accurately predict real world results with his tests.

Below please find some comparison examples from my "irrelevant tests" and my "erroneous inferences"

Recovered from Eland-Kudu-Giraffe

Reported 32-36 inches of penetration

**416 B&M  
350 Barnes X  
73/AA 2520  
Muzzle Velocity 2417 fps  
21 yd Impact Velocity 2387 fps  
18 inches Penetration  
Retained Weight 350 grs**



photobucket



458 B&M  
400 Swift A Frame  
Muzzle Velocity 2351 fps  
21 yd Impact Velocity 2295 fps  
15 inches total Penetration



400 gr Swift A Frame  
458 Win Mag Win M70  
Muzzle Velocity 2325 fps  
Sable 104 yards  
Retained Weight 400 grains  
Expanded to .792  
Impact Velocity 2000 fps



458 Winchester  
400 Swift A Frame  
Muzzle Velocity 2325 fps  
Zebra @ 177 yds



458 Winchester  
400 Swift A Frame  
Muzzle Velocity 2325  
Buffalo @ 40 yds



400 gr Swift A Frame  
458 Win Mag Win M70  
Zebra 10 ft  
Retained Weight 400 grains  
Expanded to .824  
Impact Velocity 2325 fps



400 Woodleigh

458 M70

701 RL7

2350 SPS muzzle

50 yds Wet Print

383.9 gr 9590

1.5" Expansion



458 Lott  
400 Woodleigh  
Muzzle Velocity 2450 fps  
Kudu @ 130 yds



458 Lott  
400 Woodleigh  
Muzzle Velocity 2450 fps  
Impala @ 140 yds  
Rear Impact shot



458 Lott  
500 Swift A Frame  
Muzzle Velocity 2260 fps  
25 yd Impact  
24 Inches Penetration  
Wet News Print Only  
Retained Weight 494 grs



Recovered From Elephant

photobucket

458 Lott  
500 Swift A Frame  
Muzzle Velocity 2270 fps  
Buffalo @ 40 yds



458 Lott  
500 Barnes FN Solid  
Muzzle Velocity 2275 fps  
Buffalo @ 40 yds



416 Remington  
340 Woodleigh SP  
Muzzle Velocity 2540 fps  
Wet News Print  
50 Yd Impact  
Retained Weight 339, 329 & 337 grs



416 Remington  
340 Woodleigh  
Muzzle Velocity 2550 fps  
Zebra @ 200 yds



416 Remington  
340 Woodleigh  
Muzzle Velocity 2550 fps  
Sable @60 yds

416 Remington  
340 Woodleigh  
Muzzle Velocity 2550 fps  
Roan @80 yds



50 Long

3/27/07

375 Barnes

1:12

2195 FPS

18" Paper / MAG mix

50 B&M

375 Barnes X

Muzzle Velocity 2250 fps

Recovered from Wildebeast

32 Inches Penetration



500 MDM 470 SSK HP

2425 fps Muzzle

Buffalo Australia 2009

500 MDM  
470 SSK HP

95/H-322

Muzzle Velocity 2409 fps

20 yd Impact Velocity 2352 fps

24 Inches Penetration

Retained Weight 357 & 356 grs



50 B&M  
510 SSK FN Solid  
Muzzle Velocity 2025 fps  
62 inches Total Penetration  
Sometimes out the back  
of the box  
100% Straight Line Penetration  
1:12 Twist

50 B&M  
510 SSK Solid  
Muzzle Velocity 2100 fps  
Recovered from Rear shot  
Elephant  
84 inches of penetration



458 B&M  
450 Swift A Frame  
Muzzle Velocity 2156 fps  
50 yd Impact  
20 inches Total Penetration  
Retained Weight 445 & 449 grs





458 B&M  
500 Woodleigh SP  
77/AA 2520

Muzzle Velocity 2125 fps  
21 yd Impact Velocity 2081 fps  
21 inches Penetration  
Retained Weight 493 & 478 grs



photobucket



458 B&M

Buffalo Australia 2009

500 Woodleigh 2130 fps

450 Swift A--2210 FPS

450 Swift A--2210 fps



450 Swift A--2210 fps

photobucket





The above 470 caliber Woodleigh RN has been tested in my test medium and in the test medium consistently veers off course, and tumbles. I predict that it could be possible--Mind you POSSIBLE that it could veer off course, or tumble in animal tissue.

Quote By JPK

I was going to mention round nose shape to you, but you have already noted the difference. The "pointier" 470 Woodleigh has the traditional shape for the 470NE and that shape has a long history of being less than ideal. Historical reports of increased tendency to tumble and veer.

Another By JPK

I believe you will find that the first four slugs are from 470NE's, which, as I have noted, because of their non-hemispherical shape are known to tumble more frequently than hemispherical nose solids, and to veer more frequently as well.

But of course I forgot, according to JPK the test medium is irrelevant.

Michael

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**michael458**

**09 November 2009, 18:52**

quote:

Originally posted by accit:

"I am not familiar with the PH and the elephant, but if he was in fact using any sort of SP, soft point, or expanding bullet as a 1st option on elephant, then in my opinion he made a grave error in judgement." [QUOTE]

Thanks. It was an emergency and certainly not planned. (It was from another AR thread)

I was just curious whether penetration on ele brain could be reached reliably given all your testing with TSX. A good solid would always be first choice.

I've been reading the forum for quite some time, and I always wait for confirmation from "trusted" members before I take things to heart, thanks for the heads up.

ACCIT

Well one does what one has to do in an emergency for sure. I remember once walking about with a 458 Winchester and nothing but 400 gr Swift A frames--PH did not even have a rifle! We had a little run in with an elephant ourselves, neither had a solid at hand anywhere. We managed to sort it out, but I always remember from that, I will never be without a solid again, regardless of what I might have in hand, or the mission at hand!

Welcome to the post, and to AR. One must pay close attention in some cases, I think you have chosen to do so!

Michael

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**jwp475**

**09 November 2009, 18:57**

quote:

Originally posted by JPK:

quote:

Originally posted by capoward:  
JPK,

Thanks for the comments.

quote:

I am positive that Richard Harland, Ron Thomson and Barry Duckworth are comforted by the vast testing you all have cumulatively done proving that the steel jacketed RN bullets they used to kill about 15,000 elephants between them - yes, fifteen thousand - won't travel straight and will veer preventing them from doing their jobs!

I firmly believe that Richard Harland, Ron Thomson and Barry Duckworth, plus another other African hunter post 1890 that you'd like to name, would jump at the opportunity to use modern mono-metal CNC machined bore-rider FN bullets rather than the steel jacketed C&C bullets available to them. Just as African hunters changed from round lead ball bullets to the more reliable and better penetrating jacketed C&C bullets that were later supplanted by the more reliable and better penetrating steel jacketed C&C bullets.

I don't personally know any of them but every book that I've read regarding the old African hunters indicated that while a few would hang on to the bullets, cases, primers, and powder they were used to that all others were always on the lookout for more reliable bullets, cases, primers and powder and would adopt the better mouse trap ASAP.

Myself, I'll continue to use rifles whose action design was introduced to the German military in 1898...that's my contribution to a bygone era. However I will definitely use current manufacture cases, primers, gunpowder as well as computerized CNC machined mono-metal bore-rider bullets when the intended game potentially will simultaneously hunt me and/or kill me should I not do my part. I will utilize quality bonded core bullets over straight C&C bullets for non-dangerous game unless I'm looking to explode varmints.

Life goes on JPK...Use whatever era technology that rings your chimes.

Hey, I'm a FN fan, BUT NOT FOR THE FIRST SHOT ON ELEPHANT! My experience with FN's is that they are not as reliable as steel jacketed RN's for punching through heavy bone, which may be required of the first shot, a brain shot, on an elephant. Second shot and thereafter, FN's rule because of their substantially greater penetration, perhaps needed since the second or subsequent shots are either insurance shots or made scrambling to make up for a missed brain shot, and so maybe at the worst angles.

JPK

quote:

Originally posted by JPK:  
Michael,

If you look at my reported results with 450gr FN North Forks and 500gr RN Woodleighs on elephant heads and bodies, which we have discussed before, you will note that the Woodleigh is loaded to higher potential than the NF. The heavier Woodleigh has more energy as well, but the NF out penetrates it by something on order of your observed 35%. I can't accurately calculate the % difference I've observed since so many NF's exit that it skews results downward.

JPK

Confusing..... In this thread you you claim that the the round nose penetrates Elephant heads better than the flat nose, but in the 45-70 thread you claim that the flat nose penetrates 35% better in both Elephant heads and bodies. Does the penetration change depending on the thread?

---

A 9mm may expand to a larger diameter, but a 45 ain't going to shrink

Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened.  
- Winston Churchill

**michael458**

**09 November 2009, 19:22**

JPK---Hey, I'm a FN fan, BUT NOT FOR THE FIRST SHOT ON ELEPHANT! My experience with FN's is that they are not as reliable as steel jacketed RN's for punching through heavy bone, which may be required of the first shot, a brain shot, on an elephant. Second shot and thereafter, FN's rule because of their substantially greater penetration, perhaps needed since the second or subsequent shots are either insurance shots or made scrambling to make up for a missed brain shot, and so maybe at the worst angles.

JPK

Originally posted by JPK:  
Michael,

If you look at my reported results with 450gr FN North Forks and 500gr RN Woodleighs on **elephant heads and bodies**, which we have discussed before, you will note that the Woodleigh is loaded to a higher potential than the NF. The heavier Woodleigh has more energy as well, **but the NF out penetrates it by something on order of your observed 35%.** I can't accurately calculate the % difference I've observed since so many NF's exit that it skews results downward.

JPK

Confusing??? I am not sure that is the word we are looking for? Maybe it's due to medication of some sort?

Michael

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**DWright**

**09 November 2009, 19:42**

Michael, we know him here as JPK, but after reading his comment's;  
I believe he may actually be Mr. 'Walter Mitty'!

<http://www.mazamasportinggoods.com>

**JPK**

**09 November 2009, 19:50**

quote:

Originally posted by jwp475:

quote:

Originally posted by JPK:

quote:

Originally posted by capoward:

JPK,

Thanks for the comments.

quote:

I am positive that Richard Harland, Ron Thomson and Barry Duckworth are comforted by the vast testing you all have cumulatively done proving that the steel jacketed RN bullets they used to kill about 15,000 elephants between them - yes, fifteen thousand - won't travel straight and will veer preventing them from doing their jobs!

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Myself, I'll continue to use rifles whose action design was introduced to the German military in 1898...that's my contribution to a bygone era. However I will definitely use current manufacture cases, primers, gunpowder as well as computerized CNC machined mono-metal bore-rider bullets when the intended game potentially will simultaneously hunt me and/or kill me should I not do my part. I will utilize quality bonded core bullets over straight C&C bullets for non-dangerous game unless I'm looking to explode varmints.

Life goes on JPK..Use whatever era technology that rings your chimes.

Hey, I'm a FN fan, BUT NOT FOR THE FIRST SHOT ON ELEPHANT! My experience with FN's is that they are not as reliable as steel jacketed RN's for punching through heavy bone, which may be required of the first shot, a brain shot, on an elephant. Second shot and thereafter, FN's rule because of their substantially greater penetration, perhaps needed since the second or subsequent shots are either insurance shots or made scrambling to make up for a missed brain shot, and so maybe at the worst angles.

JPK

quote:

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JPK

Confusing..... In this thread you you claim that the the round nose penetrates Elephant heads better than the flat nose, but in the 45-70 thread you claim that the flat nose penetrates 35% better in both Elephant heads and bodies. Does the penetration change depending on the thread?

No confusion. Steel jacketed RN's defeat the zygomatic arch, tusk bases, leg bones, shoulder blades, the skull/spine knuckle, the spine more reliably than FN solids in my experience and testing.

On an elephant, one's first shot, whether you are hunting that elephant or it is coming for you, is likely to be a brain shot. Since the likelihood of encountering the tusk bases, the bone of the lower face, the zygomatic arches, the spine or the knuckle at the skull/spine junction is high, use the bullet that has proven the most reliable for that purpose.

For second and subsequent shots, where penetration of muscle, guts, may be at a high premium, use the bullet that is most suitable for that purpose. FN's out penetrate RN's by a significant margin in bodies. Moreover, full penetration of the legbone or the shoulder blade or the spine is not required for successful performance. An elephant cannot run on three legs, cannot even walk, so the bone needs only to be broken. Likewise the spine.

JPK

Free 500grains

**RIP**

**09 November 2009, 20:11**

Michael,  
Wet news print is an excellent medium.  
It is mostly water by weight, like animal biomass.  
It shows exponential increase of resistance with velocity, like animal biomass.

Th dry glossy magazines sandwiched in it:  
That does add some resistance of linear variation, zero increase or constant increase with velocity. Yes some tissues in an animal show that too.

Do you make an effort to keep the glossy paper dividers dry by putting it in plastic bags?

Do they serve as "witness screens?"

Adding waxed cardboard or posterboard or thin plastic screens at graduations in the stack would add to your info.  
The thinnest sheet of masonite could also serve as a witness board.

The only advantage of my IWBB over your setup is being able to read the witness boards and flat bucket sidewalls for orientation of the bullet as it passes.

You would be able to read keyholing when it starts, at what depth, etc.

The first few inches of wet print offers the greatest drag on the bullet.  
That falls off exponentially as the bullet slows down, but so does the motive force driving the bullet.

The dry witness screens, cards, boards tend to offer a constant resistance across the velocity spectrum, and become more important as stoppers as the bullet slows down.  
They tend to capture the bullet in its terminal attitude.

Ron

**JPK**

**09 November 2009, 20:12**

quote:

Originally posted by capoward:

quote:

Originally posted by JPK:

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As for buff, any decent solids delivers more than sufficient penetration, RN, FN, ogived, truncated cone, brass, copper, cup and core, cup and bonded core. Doesn't matter.

In lieu of a RN or FN solid, I would suggest a cup point North Fork for buff. 20% less penetration than a NF FN solid, which gives it penetration on par with, perhaps exceeding the RN solid in a given cartridge, some limited expansion, greater wound channel. For buff, whats not to love about that?

RN or FN? Both have their advantages and their disadvantages. But no matter how anyone charecterises the RN's performance, it has stood the test of time and earned hundreds of thousands of successes. It is reliable for DG. More reliable on elephants than current FN's. No amount of re-writing history, or phony tests will change that, though future advancements may eventually make the FN as reliable and may even eventually render the RN obsolete. Not soon, I think.

Whether Richard Harland, Ron Thomson or Barry Duckworth would use a FN is immaterial - though Richard Harland has relatively recently voiced his continued confidence in the steel jacketed RN's here on AR - they successfully used RN's for those 15,000 elephants. Successfully, despite the TESTS and opinions of those here that RN's aren't good for s--t! And none of them recall any issues with those RN's!

JPK

JPK,

Truthfully from all of your prior comments I'd never have guessed that you find FN bullets useful. Nor would I have guessed that your principal beef with them is 1st shot - brain shot - on elephant.

So from your above noted statement your only issue RN vis-à-vis FN bullets is that in your perception RN steel jacketed C&C bullets will penetrate elephant heavy facial bone better/more reliably than will FN bullets. That's your experience and your beliefs.

I have no issue with your 1st shot preference just as I have no issue with another hunter who believes that the current crop of CNC machined FN mono-metal bullet is more reliable for the same 1st shot.

I agree that North Fork's cup point solid is a better bullet to use vis-à-vis either a RN or FN solid on buffalo.

Ah just saw your follow up post. No I don't image that any elephant spear hunters are still alive, long dead, replaced by those who use AK47s in their stead.

I'm neither offended by nor pissed at any of your comments. Hum..was it Forest Gump who stated "reality is as reality does"? No, most likely not.

Capoward,

I hope your not pissed off, after all this whole thread is just irrelevant banter on a topic that is unlikely to be resolved while any of us are still breathing. If duck or deer season were open, I sure as hell wouldn't be here, and its Monday am so my attention to this thread is running short!

On the spearsmen - I seriously doubt that many retired after a successful career! Some of the poor bastards stuck using those cupro-nickel jacketed solids didn't make retirement either, but our trio who used hemispherical, steel jacketed round nose solids on 15,000 elephants made retirement!

Harland and Thomson are accomplished authors, I would recomend their books - great exciting reading and lots to learn from them as well. Ndlovu and The Hunting Imperitive from Harland, Mohohoboh (sp?) from Thomson.

As far as RN vs FN, as I have said, each has its strengths and weaknesses. So does each method of construction, and material...

But what draws me into these "discussions" with Michael and others is the erroneous inferences drawn from tests which cannot reproduce real world results and so cannot predict expected results in the real world.

Here it is the general condemnation of RN solids, which the so called TESTS predict cannot work, but which work quite well in reality... And which work equally well when tested in rellevant material, which predicts results obtained in the real world.

Also other simply false assertions, like slow solid bullets penetrate game less than faster similar solid bullets...

Where I get a kick is that after shooting so many elephants and so many solid bullets into them, live and dead, and a significant, but lesser number into buff, is reading so many wet newsprint experts or water tests expert tell everyone how solid bullets act in game. It isn't unlike watching the sun rise in the east while some fellow is trying his best to tell me and anyone who will listen that the sun is really rising in the west...

JPK

□ Free 500grains

**Extremist458**

**09 November 2009, 20:35**

Wow, it's amazing how much you miss when you are gone for just a few days (Duty called)!

Michael 458, Bravo on the RN bullet box; Brilliant! (to say the least). Except you might need to spiral it some maybe; 3 dimentionions of penetration!

Honestly, I think I got you a little worked up on my last post (now 3 pages ago) when I was actually agreeing. I am completely for the FN, and I was referring to such. Sorry if I misled, I didn't really mean to. My reference was to your post earlier saying that even the FN's of longer/heavier design still veer off course in the latter portion of their journey. And to compliment your findings on the lighter and shorter bullets still doing remarkably well. My intent was to describe what I believe was happening in those tests you posted. With the 900 grain being stable at 1900 but not at 1700, was one example I was trying to relate to. For all intents and purposed, I am trying to identify what would characterize the perfect bullet, as most of us are doing here. Now I guess the reasons behind it are null when it comes to outcome. If it works, then lets use it.

Now concerning the comments made about the slight expansion of the FN vs the min./none, there are two good points to discuss. One would be yes, it is possible in the 800GS vs 750Barnes test that the 750 MIGHT do a little better, but the difference would be so slight as to have no real life impact. Or, more my point, that the substantially greater damage/shock/trauma of the enlarged meplat would be more lethal. Even when we are talking about Ele skull, you must understand that the penetration we are getting here in most all of the tests above is going to be more then enough. If you can cause more damage, more shock and trauma to the brain (or in the case of a very near miss, you will still cause the intended effect), then this is desirable.

Now, a point must be made here. If you expand the front a little, as yes, velocity has a great role in this, then it does create a larger temporary cavity, therefore allowing greater penetration (less resistance). This can be offset by the greater force required to push the bullet through the mass. So, my intended research question is, at what point do you reach this apex of cavitation vs penetration?

I can imagine where this would be, but I think it will differ with every caliber, and with velocity. In regards to the latter, we do have a bullet that already controls this, to the best any bullet can reasonably do so. This is the reason I love the GS Custom bullet so much. If it strikes at a lower velocity, where penetration depth will be of the greatest importance (seeing you are using suitable rifles, which I don't think anyone here is lacking) then it will not expand and push through to the vitals without spending too much energy expanding. This is the downfall of all lead bullets and the associated expansion, or lack there of with over-built solids. They do not do as much damage as can be done with the excess energy given to them. If you are shooting at 2500+ you want to spend a little energy inducing trauma, as you have plenty of penetration as we all know. A bullet must adapt somewhat.

Bone! you shout! Yes, bone is another topic, another obstacle. So, heavy over-built solids do well here, and usual, but do have a tendency to do very little damage. This is just one more reason RN's stink. They do less damage, penetrate less, and not straight. If the bullet is too long, like some heavy bullets tested here, they can start to yaw or tumble. I will not go into the reasons, as it will only start more discussion here, but the point here is that you want the best of both. I have seen the soft leads fail on bone, where the solids do well, and the opposite when it comes to soft tissue; heavy solids leave much to be desired when dropping an animal where the expanding bullets do well.

Now find the best of both, and a bullet that can do it all. I have to bring it up once again, but the GS FN's are about as good as they get. I have seen them expand just enough in hard body animals, and punch right through the toughest bone on earth, Rhino skull, and the thickest, Ele skull, even at super high speeds...but they do ample damage when needed. With regards to their HV line, they do the same. Seen those, even in very small bores at high speeds, punch through skull and still do enough damage to drop an animal on the spot (when not hitting the brain).

If you are only to look at penetration, and nothing else, then we have come full circle to the origin of this thread. Take a truncated cone 5-7 degrees, very large meplat, tungsten cored FN of around 600 grains in the .458 and push in around 2000 fps (and this will vary greatly), at it will out penetrate everything else. I have even tested this. I have built bullets of this very design, punched them through steel plate, wet and dry sand, wood, wet paper and gelatin, and they work better than anything else (except steel plate). So, until a bullet like this can be made for our hunting pleasure, then we will just have to use what we have, and we can all see we agree with nearly everything, if you simply take out the hows and whys.

Note: The FN nose itself (large meplat) is in essence a very good regulator of velocity to damage, within a spectrum. If you drive it slow, it doesn't displace as much and concentrates the energy on penetration. If you drive it fast, the inertia of the material being displaced at that speed will carry it farther away and do more damage (greater cavitation). Hope I helped.

-Extremist

"Pain is weakness leaving the body" -Instructor  
Victory in life is dying for what you were born to do.

"I hope you live forever" -300

"Never judge an enemy by his words, he might turn out to be a better shot than a writer"

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**michael458**

**09 November 2009, 21:43**

Extreme458

Man I would have to go back a long way to 3 pages ago, whew! No sorry needed, we are on the right track!

You have many valuable points and reasonably thought out.

RIP

Yes, wet news print is an excellent test medium, as any reasonable thinking person can plainly see. Several examples presented-- again!

The glossy paper is also wet along with the news print. The entire mix is soaked, and allowed to soak overnight. Soaked again that morning, then it is ready to work. I have no dry inserts of any sort.

Now the reason I do this is consistency between different bullets. Stated many times no medium can or does represent exact duplicates of animal tissue. However, if we try to be as consistent as possible then over a long period of time, as data collects, it is more possible to compare differences in two different bullets. Also over time as one collects bullets fired into animal tissue, one can begin to "correlate" data, between animal tissue and the test medium. This is exactly what I have been doing over a period of several years. As any reasonable individual can readily see from the many photos I have provided, this data correlates between the two mediums in a fairly consistent basis! No absolutes, by any stretch, but not a bad predictor of future "possibilities"!

It is always good especially concerning solids, to stress a bullet to the extremes at times. For instance if you take two bullets, say two RN designs for example. If one nose design penetrates deeper, and straighter than the other design in the same medium, one might then want to put an adder in the mix to find out at what point the more successful design might be stressed enough to fail, or at least penetrate in a less desirable manner. Now an insert of "steel" is not a reasonable test, as we are not testing armor penetration, however as you mention waxed cardboard, posterboard thin plastic screens would serve a purpose. I tend to go at times a little further, using a 2x4 or even a 4x4 if handy! This really puts some stress on some designs. In even more extreme, put the 2x4 in at angles! More extreme than that, fiberboard, extremely dense material, put in at angles!!!! The only bullet I have put to that extreme fiberboard test was the 510 gr .500 caliber solid I use in the 50 B&M and the 500 MDM. Each time it burned straight thru them and proceeded to penetrate in a straight line to 62 inches of total penetration! It seemed to not even notice the fiberboard inserted at an extreme angle! Now in my conclusions of this, I decided that if this bullet could be stressed to that extreme, and still accomplish the mission, then this bullet had a very very good chance of being successful and accomplishing my mission in the field on animal tissue.

Shortly after that I put it to the test in Zimbabwe in 2007, I had two elephants and 5 cape buffalo on quota at the time. Using this same exact 510 gr .500 caliber solid the first medium size bull took a frontal brain shot at 30 yds, penetrated the entire head and was lost in the body somewhere. Once the head was removed, there was a nice perfect hole going out of the brain cavity. Good straight line penetration, thru and thru. The second elephant was a broadside shot at 35 to 40 yds, bullet penetrated thru the heart and exited the far side, almost going down, but regaining and turning away from me, I fired the second round which entered from the rear and exited the front of the chest traveling 7 ft of elephant in a dead straight line, as far as I could tell. The third bullet entered about 1.5 ft behind the second bullet and traveled into the chest cavity. This bullet was recovered and is included in the photos previously. I gave it only 84 inches of penetration in elephant because I know for a fact that one will penetrate that much as the second bullet fired exited at 84 inches. Not being able to get exact measurements, I gave this 3rd bullet only 84 inches.

I shot several of the buffalo with this bullet as second or third shots and did not recover any of the 510s. I was also trying and working with the 485 gr version for this work, I did recover some of those. While their performance was more than adequate, the 510s out penetrated them. As would have been expected.



The jest of the matter is this--while no test medium is equal to animal tissue one can still learn from and use data from doing test work before taking a bullet to the field. What I learned in my test work on this particular bullet was validated in the field on elephant and buffalo. Recently shooting 20 of my own buffalo, and seven others belonging to my hunting partner in Australia I once again validated test work which began on the range in test medium, my test medium. Not only with that same 510 gr .500 caliber solid, but several other bullets in both 500 caliber and 458 caliber. What was successful in the lab, was successful in the field on animal tissue.

Michael

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**capoward**

**09 November 2009, 22:10**

JPK,

^Twas time to hit the rack, nothing else.

If I learned a few things from my 35½yr law enforcement career they'd be that 1) deadly shit happens at the most inopportune moment, 2) practice can never fully prepare you for that initial 1-3 seconds of a live and death situation, 3) you'll never have 100 % agreement on either 1 or 2, and 4) continual evolving firearm training under correctly simulated firefight situations will give the good guy the maximum percentage chance of prevailing...hopefully to retirement age without having suffered great bodily damage along the way.

I've not shot elephant and unfortunately due to the last 2½ years of economic conditions doing so has been moved from imminent to now being placed towards the bottom of the bucket list.

Much of the discussion over RN solids vis-à-vis FN solids mirrors the discussions of the .270 caliber vis-à-vis the .284 caliber, the .366 caliber vis-à-vis the .375 caliber, or whether the .458 WinMag can actually kill an elephant without getting the hunter killed first. Any logical individual will understand that the .458 WinMag has been used to kill thousands of elephant without death to the hunter...but that in its early days of use there was definitely issue with Winchester's .458 WinMag ammunition use after years of storage in less than optimum conditions in Africa still being able to deliver a killing vis-à-vis a squib shot. With the .270 and .366, they'll kill just as deadly, or no-deadly, as the .284 and .375 when bullet quality is identical. Issue of RN solids vis-à-vis FN solids at least to me is a dual issue; steel jacketed C&C bullets whether RN or FN are truly not solids though with proper jacket construction they can both be superb deep driving deadly bullets or they can be highly prone to jacket integrity failure which could have deadly consequence to the hunter. I'm personally unaware of any current manufacturer of computerized CNC machined RN mono-metal bullets; spire point and spire point hollow point yes but RN no so other than a quick special run there's no really a true comparison in the RN vis-à-vis FN mono-metal bullet arena.

Personally, when elephant does arrive on the bucket list I'll be using computerized CNC machined FN mono-metal bullets of the latest construction that I've sufficiently used to assure faith in both it and I doing our parts for a quick and safe kill.

My comment for all, whether RN or FN solid aficionado is practice well, practice a lot practice with an accurate killing load, practice under simulated conditions with rifle and hunting load, and use both in actual hunting conditions so that when your elephant or buffalo hunt finally arrives that it will be successful and all humans involved with return from the successful hunt without physical trauma having been inflicted by the intended game.

Ah...time for coffee.

Jim 

"Life's hard; it's harder if you're stupid"  
John Wayne

**MikeBurke**

**09 November 2009, 23:04**

quote:

Originally posted by capoward:

My comment for all, whether RN or FN solid aficionado is practice well, practice a lot practice with an accurate killing load, practice under simulated conditions with rifle and hunting load, and use both in actual hunting conditions so that when your elephant or buffalo hunt finally arrives that it will be successful and all humans involved with return from the successful hunt without physical trauma having been inflicted by the intended game.

Ah...time for coffee.

I posted on another thread that you guys have way too much time on your hands. 😊

The level of research done by Michael and others far exceeds what the average person is willing or even capable (financially and time)of doing.

I view things from a simple perspective. My first elephant hunt was last month and I could have not asked for a better experience. I depended on Woodleigh solids in my 470. The fact that combination has been killing elephants for many many years was good enough for me not to run penetration tests. My time was spent learning how to shoot the double and perfecting a load that I was comfortable shooting. Plenty of range time and dry firing with snap caps certainly helped my hunt. For me the hunt is everything, especially the tracking. For others it seems as though the hunt is almost anti-climatic, it just proves their testing. Each to his own.

However after reading most of this thread and even understanding a little of it, I am ordering some FN solids from Northfork. I have been told they are safe in the doubles. So now I have about 10 months to find a good load and continuing practicing before my next elephant hunt.

So the point of the post is to thank those who do all of the testing and share their findings even though there are differences of opinion. A reasonable person should be able to read the information and make an educated decision.

**michael458**

**09 November 2009, 23:28**

Hey Mike

Time, yes it takes a lot of time. No, not that much on my hands, but that much passion for getting things right! I stay busy!

Welcome glad to have you, and your opinions.

All I ask (I think you have already done this) is that you read enough of MY posts to get the truth of what I have actually stated. There are posts by one individual that continues to "Fabricate" my statements, statements I have never made. Please just read enough of MY POSTS to be able to tell the difference.

As you say, and I contend, that any reasonable person can decipher the information and make a reasonable and educated decision. I am glad you have been able to get something out of it.

Michael

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**RIP**

**09 November 2009, 23:35**

Michael,

OK, I got confused again, thinking the gloss paper was dry. It adds resistance merely by its extra density, tensile strength or rag content (whatever), even when wet, as compared to the ordinary news print.

That's good.

I just think a thin, "readable" card or divider of some sort, one every 6 to 12 inches, your pick, would add to study.

Pull out the sequentially-numbered and orientation-marked cards and put them in a folder with the recovered bullet, and you have a virtual highspeed film of the bullet's path by reconstruction.

**michael458**

**09 November 2009, 23:43**

RIP

The thin card idea is absolutely "brilliant" inserted at regular intervals, distance depending on what was being tested. This information would in fact give a picture of where and how the bullet penetrated that could be kept on file! A very excellent idea, one that I will endeavor to solve before the next test!!!! It would have to be wax coated to resist taking in moisture from the print! It also would not effect the test results at all.

Extremely excellent thought!

You see, we are all learning something, or almost all of us!

Thank you!

Michael

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**capoward**

**09 November 2009, 23:43**

quote:

Originally posted by Mike70560:

I posted on another thread that you guys have way too much time on your hands. 😊

👤 My wife would agree with you...at least too much to do what I want to do and not enough allocated to appropriately take care of her honey-dos.

quote:

Originally posted by Mike70560:

However after reading most of this thread and even understanding a little of it, I am ordering some FN solids from Northfork. I have been told they are safe in the doubles. So now I have about 10 months to find a good load and continuing practicing before my next elephant hunt.

I've talked to them and yes the CUP point and FN solids are both bore riders with bands only riding the grooves. I talked to them about .410"ers and they recommended that I slug the bore – in your case bores – so that they could assure that their solids were perfect for my rifle.

In your case you have two barrels to deal with so you'd want to assure the bullet's shank diameter is fitted to the lesser bore diameter of the two barrels as the shank will not squeeze down to fit the bore as will even a steel jacket C&C solid such as the Woodleigh. My presumption here but I'd think you'd be fine with the band diameter of the bullet matching the greater of the groove diameters between your two barrels as the bands fold back into the bullet grooves. Give them a call and see what they have to say.

quote:

Originally posted by Mike70560:

So the point of the post is to thank those who do all of the testing and share their findings even though there are differences of opinion. A reasonable person should be able to read the information and make an educated decision.

+1  One of the best comments yet.

Jim 👤  
"Life's hard; it's harder if you're stupid"  
John Wayne